REMARKS

Applicants respectfully traverse and request reconsideration.

Applicants wish to thank the Examiner for the notice that Claims 4, 9 and 15 would be allowable if rewritten to include any limitations from any intervening claims.

Applicants note that the Examiner has indicated that Claims 2 and 12 have been objected to. Applicants submit herewith amended Claims 2 and 12 to correct the stated informalities. In addition, an informality on Page 7 of the Specification has amended by Applicants. Similarly, Figure 2 have been amended by Applicants. The term "VERTICE COORD" in steps 204 and 206 have been replaced with the term "VERTEX COORD'S." Applicants respectively note that no new subject matter has been introduced in the aforementioned amendments.

Claims 1, 3, 6-8, 11 and 13-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Matthews, III et al. (U.S. Patent No. 5,724,492). Matthews, III is directed at a system and method for displaying a control object in an interactive television or computer system. The system appears to use simple animation and sequential movie clips to give the appearance of a rotating 3-D TV menu wherein the object is comprised of panels (i.e., faces) displaying information to the user. (Col. 15, Lines 47-67). Texture mapping may be used in conjunction with the animation and movie clips to assist in convincing the user that the object is 3-D, but there is no teaching of rotating an image by mapping the source image as a texture into a rotated destination area.

While referencing Figures 5-7, Matthews, III teaches a system and method for providing on-screen information to a viewer utilizing a control object/channel manager that functions in an interactive television or computer system. (Col. 13 - Lines 59-61). In the preferred embodiment of Matthews, III, the control object/channel manager is

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displayed in a pre-determined location of the screen to interact with the viewer. Serving as a "simple menu," the channel manager is preferably a three-dimensional collection of panels, each of which presents the user with various informational, functional or control properties associated with the television or computer environment. *Id.*; *See also* Fig. 1. Among the various informational menus that can be used to describe the properties of the interactive system, the panels may display information relating to a specific program, volume, reminder information, etc. Upon input from a user, the object spins about its major axis to display the proper set of information on a given panel or face. Instead of using a significant amount a screen's visual space to display these properties, Matthews, III utilizes the three-dimensional control object to conserve space. (Col. 15, Lines 5-10).

When the user activates the channel manager via remote control or other device, the channel manager appears as a distant three-dimensional hexahedron tumbling and rotating about its axis as it moves from infinity to its final position of the monitor. (Fig. 6, Fig. 5, Element 225). Upon resting in its final position, the channel manager can appear either as a rectangular two-dimensional object or three-dimensional object. With respect to Fig. 7, a user can rotate the object to display a new panel and associated properties of the system. As the reference teaches, this process is performed preferably by a three-dimensional animation technique used to depict a multi-sided object rotating along its major axis thereby revealing another panel. (Fig. 7). Specifically, a user can direct the object to display volume information at one moment and then direct the panel to rotate and display program information at a second moment.

While the reference teaches the use of 'texture mapping' as a technique used to "convince the viewer that the [channel manager] is a three-dimensional representation,"

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the Office Action appears to have incorrectly interpreted Matthews, III to teach "defining the source image as a texture" and "mapping the source image as a texture into the rotated destination area. (Claim 1, Elements b and d). In fact, Matthews, III teaches that the object appears to rotate not as a result of texture mapping, but rather as a result of *animation of 3-D models*. (Col. 15, lines 39-67). In this respect, texture mapping is not used to rotate an image, but rather used to account for changes in perspective as the picture is rotated (via an animated technique) in three-dimensional space.

In this regard, Matthew, III appears to teach a *conventional* approach to texture mapping in which a two-dimensional surface is applied to a 3D object such as the face of a 3-D object (i.e., a panel). *See* Computer Desktop Encyclopedia, Alan Freedman, pg. 970-971 (9th edition, 2001) (defining the common method of texture mapping to be the process of creating "a 2-D bitmapped image of the texture, called a 'texture map,' which is then 'wrapped around' the 3-D object"). In essence, the conventional use of texture maps is limited to draping a 2-D texture image over a 3-D object. Matthews, III employs this conventional approach to provide a more realistic three dimensional image to the user. The three-dimensional image then rotates about its major axis utilizing real-time three-dimensional graphics and animation. (Col 15, Lines 47-67).

Furthermore, Matthews, III fails to teach the process of receiving a command to rotate a source image located in off-screen memory. Instead, Matthews, III teaches a process in which a user requests an interactive control panel displaying properties of an interactive system. By requesting a particular panel, a user is not issuing a command to rotate an image located in off-screen memory. Instead, the user is merely interacting with a plurality of 2-D panels which display information and control properties. The

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user's command to view a particular set of properties appears on the screen *in only one orientation* such that a viewer can read/interpret the information. Upon viewing a particular panel of information, the user may desire to view a new panel displaying new information. As a result of this request, the 3-D channel manager rotates about is major axis to hide the original panel and display the second panel. In this regard, a source image located in off screen memory is not being rotated with respect to its original position. Instead the source image is merely appearing on a new 2-D panel of the 3-D object as 3-D graphics and animation are employed to make the object appear to rotate.

As articulated by the Office Action, Matthews, III also fails to teach the calculation of vertices associated with the rotated destination area as taught by Applicants' Claim 1. (Office Action, Page 3, ¶5).

As a result of the foregoing, Applicants respectfully believe that Matthews, III fails to render obvious Applicants' Claim 1.

Method Claim 7 reflects limitations of Claim 1 while adding further limitations indicating which components perform steps (a)-(d) of Claim 1. For instance, Claim 7 indicates that a command to rotate a source image is received *through a driver* (e.g. host processor). As a result of allowable Claim 1, Claim 7 is respectfully believed to be in proper condition for allowance.

Claim 13 corresponds to a storage memory claim that comprises executable instructions that when read by one or more processing units, causes the processing units to essentially implement the methods of Claim 1. Because of its similarity to allowable Claim 1, Claim 13 is respectfully believed to be in proper condition for allowance.

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Claims 3, reflects additional limitations upon allowable parent Claim 1 and is therefore believed to be in proper condition for allowance. Moreover, Matthews, III fails to teach the limitation contained therein whereby the method of Claim 1 also includes the step of receiving one of user selected screen orientations that includes at least one of a 90 degree, 180 degree and 270 degree orientation. In contrast to Applicants' claimed invention, Matthews, III does not appear to teach user selection of the orientation of a rotated image. The user's interaction with the Matthews, III system is limited to requesting various information concerning the interactive system. The user has no control of the object's orientation because the rotated object is always oriented in the same manner. The object merely rotates about its major axis exposing a new face to the viewer.

Claims 8 and 14 correspond to Claim 3 and further depend upon allowable Claims 7 and 14. For the aforementioned reasons, Claims 7 and 14 are also deemed to be in proper condition for allowance.

With respect to Claims 6 and 11, Applicants respectively note that both claims add further patentable subject matter and depend upon allowable Claims 1 and 7, respectively. Furthermore, Applicants respectfully contend that, in rejecting these claims, the Office Action merely cites two paragraphs which explain that memory connected to a CPU is accessed by a computer via an I/O circuit (Col. 10, Lines 60-67; Col. 12; Lines 51-64). Neither paragraph renders obvious the limitations of Claims 6 or 11 in conjunction with Claims 1 and 7, respectively. The cited paragraphs do not relate to storing source images as bit map images in off-screen memory, calculating vertex information for use in 3D rendering, mapping the source image as a texture into display

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memory, or storing the rotated image into display memory. Claims 6 and 11 appear to be in proper condition for allowance.

Claims 2, 5, 10, 12 and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Matthews, III in view of Deering (U.S. Patent No. 6,466,206). Applicants respectfully reasserts the relevant remarks made above with regard to Matthews, III. As indicated above, Applicants acknowledge the Office Action's statement that "Matthews, III et al fails to teach a step of tessellating the source image into a plurality of primitive vertices." (Office Action, Page 3, ¶5). Deering is directed at a computer graphics system that calculates alpha pixels that forms a soft edge alpha key used to overlay rendered graphics and video. While Deering mentions tesselating objects into micro-polygons to decrease the need for per-pixel Phong shading, the reference appears to be silent as to any method for rotation an image for display on a display device as noted in the preamble of the claims. There does not appear to be motivation to turn to Deering regarding a solution to rotate an image for display since Deering is directed to a different problem from both Matthews and Applicants' claimed invention.

As such, Applicants respectfully believe Claims 2, 5, 10, 12 and 16 to be in proper condition for allowance.

The Examiner is invited to telephone the below-listed attorney if the Examiner believes that a telephone conference will expedite the prosecution of the application.

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Respectfully submitted,

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